

## R E M A R K S

Claim 1 has been further amended by adding a recital that "the or each oxide layer which comprises at least  $\text{ZrO}_2$ , present in the recording medium, has a thickness within a range of 2 to 6 nm," thereby to exclude, from the recording medium employed in the claimed method, any oxide layer comprising at least  $\text{ZrO}_2$  that is more than 6 nm thick. This limitation is supported by the disclosure of the specification at p. 23, lines 21-24 (application prepub. at [0100]).<sup>2</sup> Dependent claims 9 and 13 have been cancelled in view of this new limitation of claim 1. Since the present Amendment does not increase either the total number of claims or the number of independent claims, no additional fee is necessary.

Independent claim 1 (amended) and dependent claims 2, 4 - 6 and 10 - 12 are in the application. All the claims are directed to an initialization method and have been finally rejected under 35 U.S.C. §103(a) as unpatentable over JP 2002-260283 (Onaki et al. JP '283) in view of JP 10-055539 (Ebina et al. JP '539) and either Nobokuni et al. '407 or EP 1260973 (Harigaya et al. EP '973), with or (except for claim 12) without Maeda et al. '375.

As understood, the final Office Action (see p. 4) relies on Onaki et al. JP '283 with respect to  $\text{ZrO}_2$  layers. In particular, the final Office Action asserts that it would have been obvious to modify Example 2 of Onaki et al. JP '283 by substituting a  $\text{ZrO}_2$ -MgO,  $\text{ZrO}_2$ -CaO or  $\text{ZrO}_2$ - $\text{Y}_2\text{O}_3$ - $\text{TiO}_2$  layer for the  $\text{ZrO}_2$ - $\text{Nb}_2\text{O}_5$  layer between the recording layer and the lower protective layer in that Example.

The latter  $\text{ZrO}_2$ - $\text{Nb}_2\text{O}_5$  layer of the Onaki et al. Example is 5 nm

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<sup>2</sup>The existing recital, in claim 1, that the recording medium "further comprises an oxide layer which comprises at least  $\text{ZrO}_2$  and which is located in **at least one of** a position between the recording layer and the first protective layer and a position between the recording layer and the second protective layer" (emphasis added) sets forth the presence in the recording medium of **one or more** oxide layers comprising at least  $\text{ZrO}_2$ , and consequently supplies an antecedent for "the or each" in the amendatory language.

thick. In Example 2 of Onaki et al. JP '283, however, there is also another  $\text{ZrO}_2\text{-Nb}_2\text{O}_5$  layer, adjacent and above the recording layer, having a thickness of 16 nm and apparently serving as a protective layer between the recording layer and the reflective layer. Similarly, other Examples in Onaki et al. JP '283 have  $\text{ZrO}_2$ -containing layers 15 nm thick adjacent the recording layer.

As applicants' specification explains (prepub. at [0100], cited *supra*), preservation reliability (preservability) deteriorates if the  $\text{ZrO}_2$ -containing layer is too thick. Example 10 of applicants' specification shows such deterioration in the case of a  $\text{ZrO}_2$ -containing layer that is 8 nm thick (see prepub. at [0173]-[0174]), as compared to Examples 1-7 in which that layer is within the 2-6 nm thickness range of claim 1 as herein amended, evidencing the criticality of the 2-6 nm thickness range for achieving an unexpected beneficial result with respect to preservability. Applicants submit that this range is therefore entitled to patentable weight even if amended claim 1 including the 2-6 nm thickness limitation is deemed *prima facie* obvious (which applicants do not concede) from the applied combination of references.

Since the deleterious effect on preservability thus demonstrated is a consequence of excessive layer thickness, it would be expected to occur whenever an overly thick  $\text{ZrO}_2$ -containing layer is disposed adjacent a recording layer of the claimed type, regardless of whether the  $\text{ZrO}_2$ -containing layer is disposed between the recording layer and a protective layer or is itself serving as a protective layer. It follows that the claim limitation excluding any  $\text{ZrO}_2$ -containing layer more than 6 nm thick presents a patentable distinction over Onaki et al. JP '283, which teaches the presence of such a layer 15 nm or more thick in Example 2 and elsewhere. There is no intimation in Onaki et al. JP '283 of the

criticality of ZrO<sub>2</sub>-containing layer thickness for preservation reliability.

What is lacking in Onaki et al. '283 in this regard is not supplied by any of the secondary references combined with Onaki et al. in the rejection of claim 1. Therefore, applicants further submit, the thickness limitation added to claim 1 by the present Amendment presents a patentable distinction over Onaki et al. '283 and the secondary references, however combined. As all the other claims are dependent on claim 1, they are submitted to be allowable therewith.

For the foregoing reasons, it is believed that this application is now in condition for allowance. Favorable action thereon is accordingly courteously requested.

Respectfully,

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I hereby certify that this paper is being deposited this date with the U.S. Postal Service as first class mail addressed to Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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